JARBIDGE RIVER BULL TROUT RECOVERY TEAM
Draft Meeting Summary

Date: January 24-25, 2006 – 8:00 a.m.-5:00 p.m. (1/24), 8:00 a.m.-2:30 p.m. (1/25), Pacific time
Location: College Community Center meeting room by Café X, Great Basin College, Elko, Nevada
Team Members Present: Tim Burton (BLM-Boise), John Elliott (NDOW-Elko), Scott Grunder (IDFG-Nampa; *covering meeting for Doug Megargle*), Jim Harvey (USFS-Sparks), Rich Haskins (NDOW-Reno), Gary Johnson (NDOW-Elko), Maija Meneks (USFS-Elko), Chris Reighn (FWS-Boise), Laurie Sada (FWS-Reno), Melissa Schnier (BLM-Burley), Selena Werdon (FWS-Reno)
Team Members Absent: Tim Dykstra (Duck Valley Shoshone-Paiute Tribes), Doug Megargle (IDFG-Jerome)
Others Present: Dennis Walker (NDF-Elko)

THREATS

Threats in the draft recovery plan (2004) and the original listing (except for the canyon road) were broad and essentially could be applied to the species range wide. The Recovery Team (RT) has learned more information regarding existing threats to Jarbidge bull trout since the listing in 1998-1999. The RT has attempted to capture current threats information in the table below and plans to incorporate this information into the revision of the current draft recovery plan.

The five original listing factors were:

A. The present or threatened destruction, modification, or curtailment of its habitat or range.

B. Overutilization for commercial, recreational, scientific, or educational purposes.

C. Disease or predation.

D. The inadequacy of existing regulatory mechanisms.

E. Other natural or manmade factors affecting its continued existence.

These categories were used to identify/update threats as the RT knows them currently.

NOTES AND DEFINITIONS:
Threats - for this exercise are defined as: any impact or condition that may have an influence on the long-term persistence of bull trout. The sum of these threats/impacts is what should be used to assess the long-term persistence of the species.

Magnitude (in table below) - addressed the extent to which the impacts are affecting the local population. Some magnitude calls [primarily those in FMO (Foraging, Migration, and Overwintering) habitat] are based on the DPS-wide potential impacts. In cases where the magnitude call is DPS-wide, it is noted. Magnitude is not known for some areas due to the lack

of information, primarily amount and location of use by fluvial bull trout (*i.e.*, magnitude could be greater or lesser depending on bull trout use).

Any resident population could have a migratory component.

KEY (to highlights in table below):
Text in yellow = unknown – answer may be available from literature.
Text in green = unknown – answer likely not available anywhere – unknown forever.
Text in red = unknown - survey work may answer.

Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effect/impact*	*Action(s) needed*
	DPS-WIDE			
Isolated and small (synchrony)	Rieman 1993 and others - demographics	Magnitude: high/significant – DPS wide A large fire covering entire area at high severity is unlikely based on terrain and noncontiguous fuels. Fire history suggests similarly. Severe fire in a stronghold is especially a concern.		Address all others factors we have control over as much as possible. Make things as secure as possible. Work with land mgt agencies to address areas of high risk to wildfire. BLM – RMP. USFS – wildland fire plans – only proactive activities are in Jarbidge and in canyon (Sawmill Ridge).
Metapopulation - distribution	6-8 local populations currently – evenly distributed including both elevation and distance. They are connected. Should be broadly distributed. Dunham and Rieman (1999) – conservation should include concept of strongholds.	Magnitude: moderate (based on Rieman and McIntyre *in* draft recovery plan) Steepness of habitat is inherently limiting distribution.		See actions for potential streams. (Dunham)– Pre-fire mgt plan oriented to strongholds and plan to minimize effects of suppression activities.
Abundance (# of spawning adults)	>1,000 spawning spawning = effective pop size (from Rieman and Allendorf 2001?)	Magnitude: unknown All cold water habitat suitable for juvenile rearing is occupied. Only small portions are not occupied. Unknown		Determine current population strength and areas used – 1998 survey is the best we currently have.

	BT population is low/limited. This may not be possible here due to inherent habitat/occupied area not being large enough.	how many more bull trout could be produced. Carrying capacity of habitat is not known to be fully seeded. Genetic issues. Unknown if bottlenecks or inbreeding are occurring.		Maximize potential to increase populations/abundance – I.e. address all others factors we have control over as much as possible. Make things as secure as possible. Genetics – collect and analyze samples.
Presence/abundance of migratory life history form (Rieman and McIntyre 1993 and Rieman and Allendorf 2001)		Magnitude: unknown. Currently known to be present, but abundance is not known, but believed to be relatively small.		See above for survey needs.
Thermal limitations (southernmost extent of the species range)	The vast majority of habitat in the basin is not thermally suitable (seasonally – early rearing) for bull trout.	Magnitude: definite limiting (constraining) factor on juvenile distribution. HIGH?		Continue to look for and address anthropogenic influences on temperature. Temperature monitoring. Not much else we can do, as most of factor is inherent (elevation, canyons, southernmost extent, etc.).

Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effect/impact*	*Action(s) needed*
	WF JARBIDGE -WILDERNESS			
Dams and Diversions (a)	No			
Isolation and Fragmentation (a)	No			
Inadequacy of Existing Water Quality Standards (d)	No			
Livestock Grazing (a and e)	No		Unknown - FS watershed assessment – altered watershed condition may have resulted in accelerated debris flow and altered channel morph. 300k sheep in early 1900's.	
Transportation Networks (a)	No		Minor – roads used to be there but were not stream -gutting.	
Harvest (b)	No			
Nonnative Species (e)	No			
Forest Management Practices (a)	No		Unknown – associated with timber harvest– Sawmill Creek	
Mining (a)	? – no results from Norman mine -no samples from cabin downstream	Magnitude: unknown - not tested – Norman mine is so far from live water and there is no apparent drainage – not being tested.	Unknown - Legacy or current	Not high priority to sample, but might be interesting to see what happens in spring with overland flow.
Residential Development and Urbanization (a)	No			

Recreation (a)	Yes	Magnitude: insignificant – overland transport of sediment not occurring. Minor trail crossings		

Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effect/impact*	*Action(s) needed*
	EF JARBIDGE - WILDERNESS			
Dams and Diversions (a)	No			
Isolation and Fragmentation (a)	No			
Inadequacy of Existing Water Quality Standards (d)	No			
Livestock Grazing (a and e)	No	Insignificant – trespass is all.		
Transportation Networks (a)	No			
Harvest (b)	No			
Nonnative Species (e)	Yes	Magnitude: unlikely to occur, but risk of hybridization to bull trout with high impacts. We do not want Bkt to happen! Issue is human transplant. Bkt in Emerald Lake – detached ~1 mile from EF Jarbidge – been in since 1940 – never been surveyed in EF creel and other surveys (Gary) - possible, but not likely to be get into EF via human transplant. However, there are other easier areas to get Bkt to transplant.		Keep tabs on this Bkt pop in the future. Collect BT genetic (near BKT areas) samples for baseline information to assess over time the occurrence of hybridization. Education for outfitter on potential for BT impact.
Forest Management Practices (a)	No			
Mining (a)	No			
Residential Development and Urbanization (a)	No			
Recreation (a)	No			

Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effect/impact*	*Action(s) needed*
	MAINSTEM JARBIDGE – BELOW FORKS			
Dams and Diversions (a)	No			
Isolation and Fragmentation (a)	No			
Inadequacy of Existing Water Quality Standards (d)	Maybe Yes, but there is not a clear understanding of what the state standard really means for triggering and what happens then? Regulatory influence?	Magnitude: water quality standard is not necessarily the issue, but temperature certainly is an issue basinwide. Relevant to unknown future projects. Idaho has statewide standards. Idaho DEQ does not have standards yet. Coming in 2007 – TMDL. Temperature is the only issue we are aware of.		Nevada DEP – continue to provide DEP info – to help motivate development of TMDL. Idaho – trying to meet EPA guidelines, but we can provide comment/input.
Livestock Grazing (a and e)	No	Not much access – steep/cliffy.		
Transportation Networks (a)	No			
Harvest (b)	No	Not enough access.		
Nonnative Species (e)	No			
Forest Management Practices (a)	No			
Mining (a)	No			
Residential Development and Urbanization (a)	No			
Recreation (a)	No			

Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effect/impact*	*Action(s) needed*
	WF JARBIDGE –WILDERNESS TO EF			
Dams and Diversions (a)	No			
Isolation and Fragmentation (a)	No			
Inadequacy of Existing Water Quality Standards (d)	See above	Magnitude: see above Nevada standard – 21^0 C standard May – Oct – Not nearly as protective as Idaho – 14 or 13^0 C for similar period – specific to WF Jarbidge.		Rich to follow up on NV's standard. Depending on investigation, determine more actions.
Livestock Grazing (a and e)	No		Similar legacy as WF wilderness.	
Transportation Networks (a)	Yes	Magnitude: overall amount may not be an issue, but specific areas may be affected. We have an issue (there is an effect on the aquatic systems), but may/do not agree on the magnitude. We agree on actions to be taken. <u>Temperature</u> – most shade is provided by orientation/canyon – loss of vegetation due to road placement is not thought to have had a significant influence on temperatures in this reach. <u>Sedimentation</u> – being delivered to the channel – pebble count WF very low fines in pebble counts (transport reach – b/a/some small stretches of c) – fines are likely not an issue, however geomorphic structure could be as a result of the road.		Determine locations used for overwintering. – then assess areas used and complexity of substrates (sedimentation) - Jim to look at R1/R4 survey completed and Evans and (Phifer – shovel method) Road actions: Better implementation of BMPs. Jim – USFS new road mgt plan – should resolve many issues associated with road. Population response would not be assessable until

		Forage fish species are present and abundant. Channel morph – magnitude: unknown – believed to be fairly high? To be modified based on below. It may or may not apply to all areas equally. FS reports might be a good source for magnitude info – these reports resulted in thousands $$$ spent on the road. – EIS and Evans. Fines are likely not an issue, however geomorphic structure could be as a result of the road. Lack of floodplain function/riparian, etc. Road has channelized/constricted stream in areas – reduced pool frequency/quality, reduced input of wood as a result of the existence of road. -9,000 meters of road berm is within 25' of stream channel (only Jack Creek to Pine Creek) -11.5 miles (~1/2) of stream has road adjacent to it. Portage Environmental Evans (2002) – WF higher anthropogenic sources of sediment. Burton – pool quality (only in EF) – lots of sand upstream of Murphy Hot Springs. Road maintenance – threats from spills, chemicals, accidents. Fragmentation/connectivity – Jack Creek has been fixed. No other issues. Notes: 9,000 meters of road berm is within 25' of stream channel. Only Jack Creek to Pine Creek.		multiple generations (10 years or more) from implementation.

Harvest (b)	Unknown/possible	Magnitude: because of the low number of fluvial fish, any harvest could have a population effect. Gary - not documented to occur. Bait still legal Idaho & Nevada. Unknown survival of those caught and released. Dan Schill (IDFG) data – shows difference between single hook vs. double or treble hook. Fair amount (~40%) of current use is bait.	Nevada – daily harvest of up to 10 (pre-1998).	Continued monitoring/enforcement– especially areas of congregation – creel surveys. Education – continue signage. See draft recovery plan. Look into literature regarding bait and mortality – and continue to monitor to see if it is an issue. Involve stakeholders/county commissioners.
Nonnative Species (e)	Yes	Magnitude: see above for EF. Bear Creek – Bkt – ¼ mile above treatment plant – isolated by water treatment plant – mostly isolated (3 miles) from river, however, potential for transplant to other areas. Bkt were stocked for 3 yrs heavily in WF and never took.		Gary- continuing Bkt removal from ¼ mile (Bkt occupied habitat).
Forest Management Practices (a)	Yes	Magnitude: minor, but rate is increasing. Maybe not because of boulder complexity.??? Illegal fuelwood use. More and more of a problem, especially recently. Maybe one person with many, many, many cords.	Similar to WF wilderness.	Increase education and enforcement. Designate areas for fuelwood gathering.

Mining (a)	Unknown – mining effluent – warm water from adits.	Magnitude: unknown. Chemical samples taken and being assessed. No thermal barrier. Potential chemical barrier? Channel modification – mine tailings and flood control. Limited reach. Magnitude: minor/low - < 2000ft. Water quality downstream effects – temp and unknown.		Chemical samples taken being assessed – further research, clean up depending on results. Stabilize reach and establish vegetation – private land.
Residential Development and Urbanization (a)	Yes	Magnitude: minor. Flood protection/channel alteration – short reach near town Diversions for lawn watering - magnitude: minor, no actions identified. Septic systems/fertilizer – magnitude: unknown. Evidence of stream nutrient enrichment not present.		Potential for large pool development. Potential concern for increasing risk of bull trout being subject to high angling activity. Maybe link with mine clean up activities on other side of the stream for stakeholder/community involvement.
Recreation (a)	Yes	Magnitude: low – rocky substrate, little soil on bank ATV use (currently increasing), dispersed camping (hardening and veg removal), river = road		Education – kiosks, etc. FS will do an area closure (above Pine Creek), potential for physical barriers to ATV trails and vehicle access to river (work with locals on their desire/interest). Check on dump sites/well monitoring.

Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effect/impact*	*Action(s) needed*
	EF JARBIDGE – WILDERNESS TO WF			
Dams and Diversions (a)	No			
Isolation and Fragmentation (a)	No			
Inadequacy of Existing Water Quality Standards (d)	Same as WF.			
Livestock Grazing (a and e)	No	Grazing occurs, but not a recognized impact. Use of ford/xing just upstream from Murphy – BLM - no habitat difference between upstream and downstream.		
Transportation Networks (a)	Yes	Magnitude: low - Robinson Hole Downstream of Murphy Hot Springs - similar as WF for downstream of Jarbidge.		Highway district is interested in better implementing BMP's along the WF – similar to WF.
Harvest (b)	Same as WF.			
Nonnative Species (e)	No			
Forest Management Practices (a)	Yes	Magnitude: minor. Some cottonwood harvest.		BLM RMP to include closure to riparian fuelwood harvest.
Mining (a)	No			
Residential Development and Urbanization (a)	Yes	Magnitude: minor. Murphy – potential disposal of chlorinated water into river. Pool not functional now, but could be in the future.		Be aware of potential issue if/when pool is reopened/used.
Recreation (a)	Yes	Magnitude: minor but growing. Dispersed site south of Murphy w/ fire rings. ATV's and cattle ford at this		BLM RMP to include closure of areas to OHV. BLM RMP to include mgt

		location. Robinson Hole too. Two campgrounds below Murphy.		of dispersed sites including this one (Murphy).

Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effect/impact*	*Action(s) needed*
	BRUNEAU RIVER – mouth of Jarbidge to Buckaroo Ditch diversion			Survey Marys Creek for bull trout on SPT reservation.
Dams and Diversions (a)	Yes	Magnitude: minor, but major if it occurs. Potential if bull trout are lost downstream. One – Buckaroo Ditch – complete barrier to upstream migration – good thing for bull trout. Bull trout may be lost to system if they go below the diversion. No reports of bull trout in CJ Strike reservoir or lower Bruneau River.		Fluvial radio tags – how low do they go? Larger fish. Potential to check diversion for upstream migrants during the appropriate time (spring/early summer?) Diversion waters up in mid April.
Isolation and Fragmentation (a)	No, but see dams and diversions above.			
Inadequacy of Existing Water Quality Standards (d)	Similar to above for Idaho. 13^0C for adult bull trout.			
Livestock Grazing (a and e)	Yes	Magnitude: minor. Buckaroo to mouth of Jarbidge – however access is restricted. Localized impact at Indian Hot Springs (~1 mile) – BLM grazing riparian standards are likely winter grazing.		BLM in Bruneau RMP will address.
Transportation Networks (a)	No	Road to Indian Hot Springs – not an issue.		
Harvest (b)	No			
Nonnative Species (e)	No, but potential for.	Magnitude: minor – not likely that smallmouth bass would move into BT rearing areas, smallmouth bass are not		Maintain upstream passage barrier at Buckaroo.

		active during BT FMO use. Smallmouth bass potentially could move up over Buckaroo diversion. Could result in predation of juvenile BT and competition for prey. Human introduction of warm water species above Buckaroo diversion is a concern.		Survey diversion canal if BT are observed to be below diversion.
Forest Management Practices (a)	No			
Mining (a)	No			
Residential Development and Urbanization (a)	No			
Recreation (a)	Yes	Magnitude: minor. Indian Hot Springs – camp and soak in spring. Bruneau Hot Springs too. Limited dispersed camping (most on private inholding), rafting, kayaking, camping. Human waste.		Raft trip to assess impacts and existing conditions.

Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effect/impact*	*Action(s) needed*
	DAVE CREEK			
Dams and Diversions (a)	Yes	Magnitude: unknown, likely minor – stock water w/ almost no flow effect – 2 springs on BLM. Headwater spring diversions – permitee desires more – little island tributary.		No actions. Existing permitted (water right) diversion. Research to quantify amount diverted. Then determine magnitude and if necessary, determine action.
Isolation and Fragmentation (a)	No	Genetic information: limited sample size. Shows Dave Creek distinct from WF Jarbidge.		
Inadequacy of Existing Water Quality Standards (d)	See EF.	No standard, but downstream does. Nevada.		
Livestock Grazing (a and e)	Yes	Magnitude: moderate. Forest, BLM, and private. Biggest problem is on private. 3 mile private section – late 90's severely degraded – channel wide and shallow, lack of riparian vegetation. 1 mile of USFS immediately upstream from private land – extremely high potential for BT reproduction, but temperature regime is potentially an issue. Heavy use (including trampling) in FS headwater – Maija (USFS 2003 surveys) Little Island Creek (trib to Dave Creek) – BLM – degraded by cattle grazing.		Keep trying to buy the ranch or get easement. Work with landowner (Brackett) to improve mgt to improve stream conditions. Survey private land habitat. BLM should help address in their RMP. – Recovery team input helpful in how to manage grazing to support bull trout habitat. Little Island Creek – BLM plans to fence. USFS to do range plan for

				headwaters of Dave Creek – spawning season use restriction.
Transportation Networks (a)	Yes	Magnitude: minor. Road to private land – creek runs in road for ~.25 miles. Easy to fix.		Work with landowner to get stream into its natural channel (at crossing).
Harvest (b)	No			
Nonnative Species (e)	No			
Forest Management Practices (a)	No			
Mining (a)	No			
Residential Development and Urbanization (a)	No			
Recreation (a)	No			

Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effects*	*Action(s) needed*
	DEER CREEK			
Dams and Diversions (a)	No			
Isolation and Fragmentation (a)	No			
Inadequacy of Existing Water Quality Standards (d)	Nevada			
Livestock Grazing (a and e)	Yes	Magnitude: unknown, but available – Maija. BLM – 1993 most recent survey– impacts presence then. Some bank trampling and concentrated in narrow canyon. USFS – 2003 survey – Maija – No big issues – Gary.		Update riparian survey of grazing impacts – BLM Address any issues identified by Maija's checking.
Transportation Networks (a)	Yes	Magnitude: insignificant Ford – associated with mineral exploration		
Harvest (b)	No			
Nonnative Species (e)	No			
Forest Management Practices (a)	No			
Mining (a)	No	No impact - exploration mine is on ridge - drilling holes.		
Residential Development and Urbanization (a)	No			
Recreation (a)	No			

Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effect/impact*	*Action(s) needed*
	JACK CREEK			
Dams and Diversions (a)	No			
Isolation and Fragmentation (a)	No			
Inadequacy of Existing Water Quality Standards (d)	Nevada			
Livestock Grazing (a and e)	Yes	Magnitude: minor – modify based on more info. Selena – 2001 & (Jim 2003) – some impact in north eastern tributary – bank trampling – Gary – impacts not visible recently.		Go look at it again. Check USFS 2003 survey - Maija. USFS to do range plan for headwaters of Jack Creek – spawning season use restriction.
Transportation Networks (a)	Yes	Magnitude: minor ATV crossing in headwater. Road crossing in spawning habitat on middle Jack Creek (just upstream from Jenny).		USFS travel mgt plan – maybe address – both. Fix it! Make it not conducive for spawning or something else.
Harvest (b)	No			
Nonnative Species (e)	No			
Forest Management Practices (a)	No			
Mining (a)	No	Exploration on Jenny Ridge.		
Residential Development and Urbanization (a)	No			
Recreation (a)	No	See ATV use above in transportation network.		

Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effect/impact*	*Action(s) needed*
	PINE CREEK			
Dams and Diversions (a)	No			
Isolation and Fragmentation (a)	No			
Inadequacy of Existing Water Quality Standards (d)	Nevada			
Livestock Grazing (a and e)	No			
Transportation Networks (a)	No			
Harvest (b)	No			
Nonnative Species (e)	No			
Forest Management Practices (a)	No			
Mining (a)	No			
Residential Development and Urbanization (a)	No			
Recreation (a)	No	ATV use from over the top. Sparsely used hiking trail.		

Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effect/impact*	*Action(s) needed*
	SLIDE CREEK			
Dams and Diversions (a)	No			
Isolation and Fragmentation (a)	No			
Inadequacy of Existing Water Quality Standards (d)	Nevada			
Livestock Grazing (a and e)	Yes	Magnitude: minor, to be modified by literature review. Headwaters – upper ¼ mile – looked bad – bank trampling – at least 50%. Should be willow dominated, but is not currently – upstream of BT occupied. Generally steep and rocky, therefore, is likely a transport reach.		USFS range NEPA should be able to address. Recovery team proposal to improve mgt (Pole Cr C&H) and reduce utilization of riparian/trampling.
Transportation Networks (a)	No			
Harvest (b)	No			
Nonnative Species (e)	No			
Forest Management Practices (a)	No			
Mining (a)	No			
Residential Development and Urbanization (a)	No			
Recreation (a)	Yes	Magnitude: minor. Campgrounds and trails.		USFS - trail stabilization work proposal – Margaret, but now she is gone.

UNOCCUPIED STREAMS		***NOTE***: Magnitude relates to habitat impact, not necessarily bull trout.		
Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effect/impact*	*Action(s) needed*
	BUCK CREEK (Unoccupied)	General Buck Creek comments: BLM - greatest potential for bull trout – temperature regime is lower than other tribs even though it is lower in elevation. Habitat is physically good. 75% > 0.5 meters deep. LWD – good. Road along lower part of creek and grazed – high fines. Forest section not good either – grazing and fire.		
Dams and Diversions (a)	Yes	Magnitude: minor, diversions are small. Private land – not screened. Temporary push-up. One on BLM piece up higher.		Not concerns until BT are present.
Isolation and Fragmentation (a)	No			
Inadequacy of Existing Water Quality Standards (d)	Nevada, lower end in Idaho.			
Livestock Grazing (a and e)	Yes	Magnitude: moderate. LOTS. USFS major problems. Corral in riparian on private land.		Addressed through USFS grazing rescission. Work with private landowners - Simplot.
Transportation Networks (a)	Yes	Magnitude: moderate/high Road along lower 3 miles. Culvert at mouth, and culvert at 3 miles above – whether they are barriers is		Road maintenance/Elko county. Survey culverts for passage

		unknown. There are also other culverts.		– BLM and private. - USFS info collected in 2005, but not assessed. May have included BLM culverts.
Harvest (b)	No			
Nonnative Species (e)	No			
Forest Management Practices (a)	No	Wildfire – Coffeepot 1992.		
Mining (a)	No			
Residential Development and Urbanization (a)	No			
Recreation (a)	No			

Threat/Impact	*Local pop. stream/ current threat/impact*	*Magnitude/description of current threat/impact*	*Legacy effect/impact*	*Action(s) needed*
	ROBINSON CREEK and JIM BOB CREEKS (Unoccupied)			
Dams and Diversions (a)	Yes	Magnitude: minor Jim Bob – concrete – barrier – no fish above – steep above, not suitable. Water quantity/temperature – makes it colder!!! – 1^0 C. .17 CFS – base flows 15% of Jim Bob and 5% of Robinson Creek. Lower Robinson unsuitable for BT >50^0F during summer.		None needed.
Isolation and Fragmentation (a)	Yes	Magnitude: Natural, therefore not assessed. Natural barriers in Robinson Creek (1/4 mile) ~1 meter high w/ no plunge pools – full/partial? All times of year? Redband present above.		None needed.
Inadequacy of Existing Water Quality Standards (d)	Nevada			
Livestock Grazing (a and e)	Yes	Magnitude: ??? Headwaters of both in springs are degraded.		USFS Pole Creek fencing should address some of these spring associated grazing issues.
Transportation Networks (a)	Yes	Magnitude: minor. Headwaters of Jim Bob and one down to mouth of Robinson.		Not priority, but USFS should consider as opportunity arises.
Harvest (b)	No			

Nonnative Species (e)	No			
Forest Management Practices (a)	No			
Mining (a)	No			
Residential Development and Urbanization (a)	No			
Recreation (a)	No	Some camping. Rainbow gathering site.		

Fox Creek is small and steep (low flow). RBT only up 0.5 mile. Temps on the edge. No impacts to address.

Research Needs

1) BT population survey/assessments

Tim/Chris to talk w/ Tammy Salow (BR) and Amy Harig (TU) – report next meeting.

- Verify strongholds – Gary says upper EF, upper WF, upper Dave Creek.
- Assess unoccupied streams for colonization/refounding.
- Adult abundance.
- Survey Marys Creek for bull trout in the Bruneau River basin on SPT Reservation.
- Check diversion for upstream migrants during the appropriate time (spring/early summer highest flows at diversion in mid April)
- Migratory BT info – movement/telemetry
- Telemetry potential issues:
  Cost/benefit: great information vs. population effect.
  How many to tag? Mortality rate? Likelihood of gaining quality information or info needed?

2) Genetics

- collect samples during other efforts (see above)
- analyze

3) Tributary Assessment

- Use to establish baseline for population estimates
- Influence of upland activities within tributaries to mainstem (cumulative effect of unoccupied tribs to downstream occupied habitat). – BLM to do.
- How to quantify?
- Then assess influence.

4) Temperature

- Are there thermal barriers to migration (basinwide, but primarily below the forks)
- Affecting FMO habitat and use (forcing fluvials to mouths of tribs during summer?)

  Fairly extensive existing (WF) temperature data, but none in Bruneau.
  Gary – determine locations for thermograph placement, Buck Creek, just below Jarbidge, Bruneau, Slide Creek, mainstem Jarbidge, replication other past sites, Dave Creek – up, middle, and downstream. Jim Bob and Robinson Creek temp info has been provided by private landowner contractor (includes above and below diversion), above and below Murphy.
  BLM and USFS – committed to placing – FS needs thermographs.

MAINSTEM JARBIDGE RIVER BELOW FORKS:

THREAT OR LIMITING FACTOR?	TEMPERATURE – 303(d) LISTED?	POTENTIAL UPSTREAM EFFECTS FROM UNNATURAL ACTIVITIES.
NO KNOWN HOT SPRINGS UNTIL INDAIN HOT SPRINGS ON BRUNEAU RIVER.	CAUSAL FACTOR – LOW FLOW MAY HAVE RESULTED IN ^ TEMPERATURES MONITORED UNKNOWNS – IS TEMP HAVING AN IMPACT:	GARY – 4^{o} F DIFFERENCE IN AREAS HIGHER BETWEEN DROUGHT AND NORMAL FLOW YEARS – OVER 4 YEARS

	1) THERMAL BARRIER TO MIGRATION? 2) AFFECTING FMO HABITAT AND USE (FORCING FLUVIAL BT TO MOUTHS OF TRIBS DURING SUMMER)?	

5) Bull Trout Harvest

- Bait and BT mortality – monitor (creel surveys, enforcement) to see if it is an issue. Angler drop boxes. Gary to implement.

6) Project/Implementation Related Monitoring

- Pre-implementation baseline info collection
- Effect of improving WF canyon road on habitat complexity – implementation monitoring. Jim Harvey.
- Pole Creek C&H Allotment fencing project – monitor Slide Creek – effectiveness? need?
- Some sort of monitoring for all recovery team projects implemented.

7) Quality of FMO habitat

- Generally unknown, especially mainstem Jarbidge River
- Tim Burton – mainstem JR has good pools (big/deep), but not real abundant (*i.e.*, ~1 pool/0.5 mile)
- Burton (2003) – nice pools on lower JR – very good rearing (adult?) habitat. Boulder and meander pools.

8) Mechanisms to address research needs:

- Contractors: TU, BR, others Burton mentioned

TEAM ASSIGNMENTS

- Rich - Follow up (determine the possibility of changing) on temperature/water quality standards for Nevada portion of system. Current standard is not suitable for bull trout? 15^{o}C is generally the standard for bull trout. There is not clear understanding of what the State standard really means for triggering and what happens then? Regulatory influence?

- BLM(?) – Baseline, combining existing information with what new is needed.

- Jim Harvey - Channel morphology – magnitude of road's effect on channel: fairly high? USFS reports might be a good source for magnitude info. These reports resulted in thousands $$$ spent on the road. Evans *et al.* report on CD provided to Team.

- Selena - WF Jarbidge River mine samples assessment (water, sediments, invertebrates).

- Maija - Check on Jarbidge dump sites/well monitoring. Is there any active monitoring going on?

- Maija - 2003 survey grazing/riparian conditions in Deer Creek. Check USFS 2003 survey in Buck, Dave, Deer, EF Jarbidge, etc.

- Jim – Buck Creek – USFS (barrier?) information collected in 2005, but not assessed. May have included BLM sites. Let Tim B./Melissa know whether BLM culverts were included in survey.

- Tim Dykstra – Determine likelihood of Tribal Council approval to survey Marys Creek for bull trout in the Bruneau River basin on SPT Reservation.

- Gary/Doug - look into literature regarding bait and mortality. Continue to monitor to see if it is an issue in the Jarbidge River watershed.

- Gary – Determine locations for thermograph placement. Buck Creek, just below Jarbidge, Bruneau, Slide Creek, mainstem Jarbidge, replication other past sites, Dave Creek – up, middle, and downstream, etc.

- Everyone – Develop a list of information needs/data gaps from each agency/group. Certainly should include "actions" identified in threats/impacts table.

- Jim - Look at R1/R4 survey completed and Evans and (Phifer – shovel method) – WF Jarbidge River below Wilderness.

- Everyone - Develop consistent protocol for sampling and habitat surveys.

- Tim/Chris – Meet with Tammy Salow (BR) and/or Amy Harig (TU) re: telemetry/movement studies. Discuss mortality, period of sampling, etc.

- Chris – Work with Tim D. re: Marys Creek survey.

- Tim Burton - Double check proposal from Burt Brackett – riparian pasture – in settlement on lawsuit (no grazing on allotment – no fences to keep cows off BLM lands, therefore, not currently grazing private land). Currently, doing something different might result in not following the settlement. BLM is not doing anything with the proposal at this point. Proposal to the RT should likely come from BLM rather than permittee. Maybe not appropriate for RT to address this proposal since BLM/settlement have current jurisdiction.

- Selena – Attempt to establish someone as a stakeholder representative for participation in the February and subsequent technical team meetings.